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G70-D GENERAL PERMIT ENGINEERING EVALUATION

PREVENTION AND CONTROL OF AIR POLLUTION IN REGARD TO THE CONSTRUCTION, MODIFICATION, RELOCATION, ADMINISTRATIVE UPDATE AND OPERATION OF NATURAL GAS PRODUCTION FACILITIES LOCATED AT THE WELL SITE

APPLICATION NO.: G70-D**238**	FACILITY ID: **033-00266**

☒ CONSTRUCTION
☐ MODIFICATION
☐ RELOCATION
☐ CLASS I ADMINISTRATIVE UPDATE
☐ CLASS II ADMINISTRATIVE UPDATE

BACKGROUND INFORMATION

Name of Applicant (as registered with the WV Secretary of State's Office): Mountaineer Keystone LLC

Federal Employer ID No. (FEIN): 47-1919654

Applicant's Mailing Address: 65 Professional Place, Suite 200
City: Bridgeport State: WV ZIP Code: 26330

Facility Name: Tonys Bridge Wellpad

Operating Site Physical Address: 4000 County Route 25
If none available, list road, city or town and zip of facility.
City: Mt. Claire Zip Code: 26405 County: Harrison

Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits):
Latitude: 39.22925°
Longitude: -80.35681°

SIC Code: 1311 NAICS Code: 211111	Date Application Received: January 31, 2017
Fee Amount: $1,500	Date Fee Received: February 2, 2017
Applicant Ad Date: February 1, 2017	Newspaper: The Exponent Telegram
Date Application Complete: April 25, 2017	Due Date of Final Action: June 9, 2017

Engineer Assigned: David Keatley

Description of Permitting Action: Installation and operation of: four (4) 1.0-mmBtu/hr GPU heaters, four (4) 400-bbl tanks, and one (1) 0.0007-mmBtu/hr thermoelectric generator.

PROCESS DESCRIPTION

Raw natural gas comes from four (4) natural gas wells to sand filters. Liquid from the sand filters will go to one (1) 210-bbl sand/water tank. The gas from the sand filters will go to four (4) 1.0-mmBtu/hr GPU heaters where the gas will be heated to encourage phase separation. The natural gas from the GPU will exit the facility via pipeline. The liquid from the GPUs will go to four (4) produced liquid tanks (TNK-1 through TNK-4). One (1) 0.0007-mmBtu/hr thermoelectric generator will help provide power for the facility when the facility does not have electric power.

SITE INSPECTION

Site Inspection Date: April 26, 2017
Site Inspection Conducted By: Karl Dettinger
Results of Site Inspection: At the time of the visit, all four wells have been drilled.
Did Applicant meet Siting Requirements? Yes
If applicable, was siting criteria waiver submitted? Not Applicable
Directions to Facility: From I-79 take exit 115. Turn left onto WV-20 and travel for approximately 0.3 miles. Turn right onto CR-25/4 (Suds Run Rd.) and travel for approximately 1.7 miles. Turn right onto Mt. Clare Road and travel for approximately 2.3 miles. Turn right onto CR-25 and travel for approximately 1.7 miles and turn onto 2 Licks Rd. The access road is at the intersection.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

The following table indicates which methodology was used in the emissions determination:

Emission Unit ID#	Process Equipment	Calculation Methodology (e.g. ProMax, GlyCalc, mfg. data, AP-42, etc.)
HTR-1	Heater	AP-42 emission factors
HTR-2	Heater	AP-42 emission factors
HTR-3	Heater	AP-42 emission factors
HTR-4	Heater	AP-42 emission factors
TNK-1	Produced Liquid Tank	E&P Tanks
TNK-2	Produced Liquid Tank	E&P Tanks
TNK-3	Produced Liquid Tank	E&P Tanks
TNK-4	Produced Liquid Tank	E&P Tanks
LO-1	Produced Liquid Tank Loadout	EPA AP-42 equation on page 5.2-4, submerged loading, dedicated service
TE-1	Thermoelectric Generator	AP-42 emission factors, emissions are negligable
TNK-5	Sand Separator Tank	Mass Balance

The total facility PTE for the facility (excluding fugitive emissions) is shown in the following table:

Pollutant	Facility Wide PTE (tons/year)
Nitrogen Oxides	1.71
Carbon Monoxide	1.44
Volatile Organic Compounds	2.53
Particulate Matter	0.03
Particulate Matter-10/2.5	0.03
Sulfur Dioxide	0.01
Toluene	0.01
Xylenes	0.03
Hexane	0.09
Total HAPs	0.13
Carbon Dioxide Equivalent	2,125

Emission Point ID	Emission Unit ID	Emission Source	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (tpy)
5E through 8E	TNK-1 through TNK-4	Produced Liquid Tanks	Volatile Organic Compounds	0.84	0.22
		Emission from each Tank	CO_2e	26	7
1E through 4E	HTR-1 through HTR-4	Heaters 1.0 mmBtu/hr (each) Emission per Each	Nitrogen Oxides	0.10	0.43
			Carbon Monoxide	0.08	0.36
			Volatile Organic Compounds	0.01	0.03
			Total Particulate Matter	0.01	0.03
			CO_2e	117	510
11E	LO-1	Truck Loading	Volatile Organic Compounds	4.76	1.55
9E	TE-1	Thermoelectric Generator 0.0007 mmBtu/hr	CO_2e	4	16
10E	Sand Separator Tank	Sand Separator Tank	Volatile Organic Compounds	0.24	0.01
			CO_2e	2	1

REGULATORY APPLICABILITY

45CSR2 (Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers)

The purpose of 45CSR2 (Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers) is to establish emission limitations for smoke and particulate matter which are discharged from fuel burning units.

45CSR2 states that any fuel burning unit that has a heat input under ten (10) MMBTU/hr is exempt from Sections 4 (weight emission standard), 5 (control of fugitive particulate matter), 6 (registration), 8 (testing, monitoring, recordkeeping, reporting) and 9 (startups, shutdowns, malfunctions). However, failure to attain acceptable air quality in parts of some urban areas may require the mandatory control of these sources at a later date. If the individual heat input of all of the proposed fuel burning units are below 10 MMBTU/hr, these units are exempt from the aforementioned sections of 45CSR2. However, the registrant would be subject to the opacity requirements in 45CSR2, which is 10% opacity based on a six minute block average. Fuel burning units greater than 10 MMBTU/hr are ineligible for registration under General Permit G70-D

Emission Unit ID#	Emission Unit Description	Maximum Design Heat Input (MDHI) (MMBTU/hr)
HTR-1	Heater	1.0
HTR-2	Heater	1.0
HTR-3	Heater	1.0
HTR-4	Heater	1.0

45CSR10 (To Prevent and Control Air Pollution from the Emission of Sulfur Oxides)

45CSR10 establishes emission limitations for SO_2 emissions which are discharged from stacks of fuel burning units. A "fuel burning unit" means and includes any furnace, boiler apparatus, device, mechanism, stack or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. Sources that meet the definition of "Fuel Burning Units" per 45CSR10-2.8 include GPUs, in-line heaters, heater treaters, and glycol dehydration unit reboilers.

Fuel burning units less than 10 MMBtu/hr are exempt. The sulfur dioxide emission standard set forth in 45CSR10 is generally less stringent than the potential emissions from a fuel burning unit for natural gas. The SO_2 emissions from a fuel burning unit will be listed in the G70-D permit registration at the discretion of the permit engineer on a case-by-case basis. Issues such as non-attainment designation, fuel use, and amount of sulfur dioxide emissions will be factors used in this determination. Fuel burning units greater than 10 MMBTU/hr are ineligible for registration under General Permit G70-D

Fuel burning units burning natural gas are exempt from Section 8 (Monitoring, Recording and Reporting) as well as interpretive rule 10A. The G70-D eligibility requirements exclude from eligibility any fuel burning unit that does not use natural gas as the fuel; therefore, there are no permit conditions for 45CSR10.

Emission Unit ID#	Emission Unit Description	Maximum Design Heat Input (MDHI) (MMBTU/hr)
HTR-1	Heater	1.0
HTR-2	Heater	1.0
HTR-3	Heater	1.0
HTR-4	Heater	1.0

45CSR13 (Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation)

45CSR13 applies to this source due to the fact that the applicant is defined as a "stationary source" under 45CSR13 Section 2.24.b. *Stationary source* means, for the purpose of this rule, any building, structure, facility, installation, or emission unit or combination thereof, excluding any emission unit which meets or falls below the criteria delineated in Table 45-13B which: (a) is subject to any substantive requirement of an emission control rule promulgated by the Secretary; (b) discharges or has the potential to discharge more than six (6) pounds per hour and ten (10) tons per year, or has the potential to discharge more than 144 pounds per calendar day, of any regulated air pollutant; (c) discharges or has the potential to discharge more than two (2) pounds per hour or five (5) tons per year of hazardous air pollutants considered on an aggregated basis; (d) discharges or has the potential to discharge any air pollutant(s) listed in Table 45-13A in the amounts shown in Table 45-13A or greater; or, (e) an owner or operator voluntarily chooses to be subject to a construction or modification permit pursuant to this rule, even though not otherwise required to do so. 45CSR13 has an original effective date of June 1, 1974.

The applicant meets the definition of a stationary source because (check all that apply):

☐ Subject to a substantive requirement of an emission control rule promulgated by the Secretary.
☐ Discharges or has the potential to discharge more than six (6) pounds per hour and ten (10) tons per year, or has the potential to discharge more than 144 pounds per calendar day, of any regulated air pollutant.
☐ Discharges or has the potential to discharge more than two (2) pounds per hour or five (5) tons per year of hazardous air pollutants considered on an aggregated basis.
☐ Discharges or has the potential to discharge any air pollutant(s) listed in Table 45-13A in the amounts shown in Table 45-13A or greater.
☒ Voluntarily chooses to be subject to a construction or modification permit pursuant to this rule, even though not otherwise required to do so.

General Permit G70-D Registration satisfies the construction, modification, relocation and operating permit requirements of 45CSR13. General Permit G70-D sets forth reasonable conditions that enable eligible registrants to establish enforceable permit limits.

Section 5 of 45CSR13 provides the permit application and reporting requirements for construction of and modifications to stationary sources. No person shall cause, suffer, allow or permit the construction, modification, relocation and operation of any stationary source to be commenced without notifying the Secretary of such intent and obtaining a permit to construct, modify, relocate and operate the stationary source as required in the rule or any other applicable rule promulgated by the Secretary.

If applicable, the applicant meets the following (check all that apply):

☒ Construction
☐ Modification
☐ Class I Administrative Update (45CSR13 Section 4.2.a)
☐ Class II Administrative Update (45CSR13 Section 4.2.b)

45CSR16 (Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60)

45CSR16 applies to all registrants that are subject to any of the NSPS requirements described in more detail in the Federal Regulations section. Applicable requirements of NSPS, Subparts IIII, JJJJ and OOOO are included in General Permit G70-D.

The applicant is subject to:
☐ 40CFR60 Subpart IIII
☐ 40CFR60 Subpart JJJJ
☐ 40CFR60 Subpart OOOO
☒ 40CFR60 Subpart OOOOa

45CSR22 (Air Quality Management Fee Program)

45CSR22 is the program to collect fees for certificates to operate and for permits to construct or modify sources of air pollution. 45CSR22 applies to all registrants. The general permit fee of $500 is defined in 45CSR13. In addition to the application fee, all applicants subject to NSPS requirements or NESHAP requirements shall pay additional fees of $1,000 and $2,500, respectively.

Registrants are also required to obtain and have in effect a valid certificate to operate in accordance with 45CSR22 §4.1. The fee group for General Permit G70-D is 9M (all other sources) with an annual operating fee of $200.

40CFR60, Subpart OOOOa (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced after September 18, 2015)

EPA published its New Source Performance Standards (NSPS) and air toxics rules for the oil and gas sector on August 16, 2012. EPA published amendments to the Subpart on September 23, 2013 and June 3, 2016.

40CFR60 Subpart OOOOa establishes emission standards and compliance schedules for the control of the pollutant greenhouse gases (GHG). The greenhouse gas standard in this subpart is in the form of a limitation on emissions of methane from affected facilities in the crude oil and natural gas source category that commence construction, modification or reconstruction after September 18, 2015. This subpart also establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO_2) emissions from affected facilities that commence construction, modification or reconstruction after September 18, 2015. The effective date of this rule is August 2, 2016.

For each well site, the registrant must reduce GHG (in the form of a limitation on emissions of methane) and VOC emissions by complying with fugitive emissions monitoring as required in §60.5397a and the alternative means of emission limitations in §60.5398a.

Gas well affected facilities are included in General Permit G70-D in Section 5.0.
Are there any applicable gas well affected facilities? ☒ Yes ☐ No
If Yes, list.

API Number	Date of Flowback	Date of Well Completion	Green Completion and/or Combustion Device	Subject to OOOOa?
4703305869	March 2017	March 2017	Green	Yes
4703305870	March 2017	March 2017	Green	Yes
4703305871	March 2017	March 2017	Green	Yes
4703305884	March 2017	March 2017	Green	Yes

Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals. A centrifugal compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this Subpart.

Each reciprocating compressor affected facility, which is a single reciprocating compressor. A reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.

Pneumatic controllers affected facilities are included in General Permit G70-D, Section 10.0.
Are there any applicable pneumatic controller affected facilities? ☐ Yes ☒ No

Each pneumatic controller affected facility not located at a natural gas processing plant, which is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 scfh.

Requirements for storage vessel affected facilities are included in General Permit G70-D, Section 7.0.
Are there any applicable storage vessel affected facilities? ☐ Yes ☒ No
If No, list any emission reduction devices and control efficiencies used to avoid 40CFR60 Subpart OOOO.
None

Each storage vessel affected facility, which is a single storage vessel with the potential for VOC emissions equal to or greater than 6 tpy as determined according to this section.

Fugitive Emissions GHG and VOC Standards affected facilities are included in General Permit G70-D in Section 12.0.
Did the registrant commence construction, modification, or reconstruction of the well site after September 18, 2015 and is subject to §60.5397a? ☒ Yes ☐ No

For the purposes of §60.5397a, a "modification" to a well site occurs when a new well is drilled at an existing well site, a well at an existing well site is hydraulically fractured, or a well at an existing well site is hydraulically refractured.

A well site that only contains one or more wellheads is not an affected facility under this subpart. The affected facility status of a separate tank battery surface site has no effect on the affected facility status of a well site that only contains one or more wellheads.

Requirements for pneumatic pump affected facilities are included in General Permit G70-D, Section 16.0.
Are there any applicable pneumatic pump affected facilities at the well site? ☐ Yes ☒ No

Each pneumatic pump affected facility at the well site, which is a single natural gas-driven diaphragm pump. A single natural gas-driven diaphragm pump that is in operation less than 90 days per calendar year is not an affected facility under this subpart as well as the required records are kept.

SOURCE AGGREGATION DETERMINATION

"Building, structure, facility, or installation" is defined as all the pollutant emitting activities which belong to the same industrial grouping, are located on one or more contiguous and adjacent properties, and are under the control of the same person.

Is there equipment and/or activities used for onshore oil and natural gas production that are located on the same site, or on sites that share equipment and are within ¼ mile of each other?

☐ Yes ☒ No

Is this equipment and/or activities under "common control"?

☐ Yes ☒ No

Do these facilities share the same two (2) digit SIC code?

☐ Yes ☒ No

Final Source Aggregation Decision.

☒ Source not aggregated with any other source.

☐ Source aggregated with another source. List Company/Facility Name:

RECOMMENDATION TO DIRECTOR

The information provided in the permit application, including all supplemental information received, indicates the applicant meets all the requirements of applicable regulations and the applicant has shown they meet the eligibility requirements of General Permit G70-D. Therefore, impact on the surrounding area should be minimized and it is recommended that the facility should be granted registration under General Permit G70-D.

Permit Engineer Signature: David Keatley

Name and Title: David Keatley - NSR Permitting

Date: April 26, 2017